

Listing of Claims:

Claim 1. (original) Process for producing an object that has optical layers (2, 3, 4), with the following process steps:

- 1.1 To a substrate (1) of plastic material several optical layers (2, 3, 4) are applied.
- 1.2 the optical layers (2, 3, 4) are applied by means of a chemical plasma-impulse vaporization (PICVC).

Claims 2 through 10. (canceled)

Claim 11. (new) A lens, comprising:

a concave-shaped substrate consisting essentially of a plastic material which is temperature-stable up to at least 100° C.; and

a reflecting surface on said substrate constructed as a cold-light mirror consisting essentially of a plurality of layers of different refraction coefficients applied to said substrate by means of one of: a plasma impulse (Pi) process, a chemical vaporization process (CVD) and a phase-impulse chemical vaporization process (PICVD).

Claim 12. (new) The lens of claim 11 wherein said plurality of layers is applied by means of a chemical plasma-impulse vaporization process (PICVD).

Claim 13. (new) The lens of claim 12 wherein the total duration of the plasma action amounts to at least 1/1000 of the total action-free time span, and is at most equal to this time span.

Claim 14. (new) The lens of claim 12 wherein the coating rate of the plasma action lasts between 0.1 and 10 ms.

Claim 15. (new) The lens of claim 13 wherein the coating rate of the plasma action per time unit and per surface unit is > 10 nanometers/min.

Claim 16. (new) The lens of claim 12 wherein said substrate is a material selected from the group consisting of:

Cycloolefin polymers (COP)

Cycloolefin copolymers (COC)

Polymethyl methacrylate (PMMA)

a derivative of one of these materials.

Claim 17. (new) A prism, comprising:
a concave-shaped substrate consisting essentially of a plastic material which is temperature-stable up to at least 100° C.; and
a reflecting surface on said substrate constructed as a cold-light mirror consisting essentially of a plurality of layers of different refraction coefficients applied to said substrate by means of one of: a plasma impulse (Pi) process, a chemical vaporization process (CVD) and a phase-impulse chemical vaporization process (PICVD).

Claim 18. The prism of claim 17 wherein said plurality of layers is applied by means of a chemical plasma-impulse vaporization process (PICVD).

Claim 19. The prism of claim 18 wherein the total duration of the plasma action amounts to at least 1/1000 of the total action-free time span, and is at most equal to this time span.

Claim 20. The prism of claim 19 wherein the coating rate of the plasma action lasts between 0.1 and 10 ms.

Claim 21. (new) The prism of claim 19 wherein the coating rate of the plasma action per time unit and per surface unit is > 10 nanometers/min.

Claim 22. (new) The prism of claim 17 wherein said substrate is a material selected from the group consisting of:

Cycloolefin polymers (COP)
Cycloolefin copolymers (COC)
Polymethyl methacrylate (PMMA)
a derivative of one of these materials.

Respectfully submitted,

John F. Hoffman
Registration No. 26,280

Attorney for Applicant

JFH/pmp

BAKER & DANIELS
111 East Wayne Street, Suite 800
Fort Wayne, IN 46802

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